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September 23, 1994

The Ontario government is committed to delivering services and programs that are relevant, timely and meet the needs of our customers.


One way the government can continue to meet this commitment in times of fiscal restraint is through strategic and innovative use of information technology.

This report describes the progress the Ontario government has made over the last 18 months in its efforts to be a model user of information technology, and includes examples of how government ministries are using technology to improve service and reduce costs. Several of these initiatives have evolved through ministries working in partnership to share resources and find common solutions to business challenges.

We have laid a solid foundation by developing a corporate information technology strategy framework, improving the government's information technology infrastructure, developing appropriate organizational support structures and applying information technology to the delivery of government services. This is a good start. The challenge is now to build on this success and continue to seek new opportunities to use information technology in creative ways.

Brian Charlton
Chair, Management Board of Cabinet

Jim Thomas
Chair, Information Technology Directions Committee



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Ce rapport est disponible en français.



I Introduction

"G^{overnment} Renewal Through

Information Technology" highlights the Ontario government's progress during the last 18 months in implementing an internal information technology strategy.

This report outlines:

- the key features of the strategy;
- the corporate organizational structures that have been established to deliver on the strategy;
- the progress in developing the GO-Net infrastructure and services; and
- examples of how information technology is being applied to deliver government programs.

The Ontario government, like other governments and private sector organizations, is faced with financial challenges. At the same time, customers expect service that is responsive, accessible and affordable.

The government is committed to delivering quality services and recognizes that the effective use of information technology plays an important role in addressing the government's challenge of improved service at reduced cost.

Information technology is being used to:

- **Improve customer service and access.**

Information technology allows programs to be designed to meet client needs, makes it easier for the public to access government services, and gives staff the tools to provide effective service. For example, information technology has led to the development of a self-service kiosk that operates 24 hours a

day. This kiosk can be placed in shopping malls and other locations. Among the benefits of this kiosk are on-the-spot vehicle licence renewals.

- **Reduce program costs.**

Complex new programs can be developed at a lower cost, to help achieve the government's goals. For example, new technology for social assistance caseworkers will improve service while reducing the cost of processing claims. It will also help prevent fraud and reduce appeals.

- **Strengthen the technology sector.**

Increased use of information technology and partnerships with the private sector can stimulate the information technology sector and investment in Ontario's high-tech industries.

- **Protect the environment.**

Information technology means people can get government information and services with less travel, and it enables people to telecommute or work from home. This reduces the need for expensive commuting and the resulting impact on the environment. It also reduces the use and waste of paper.

II Ontario Government Information Technology Strategy

There are three basic components to information technology: infrastructure; applications; and information.



Infrastructure - the physical facilities and services that comprise the "wires" acquired from common carriers or other providers. It also includes computers on a common network, and the computer platforms used by the government to develop and run applications. Infrastructure also includes operating software, human resources and network management tools.



Applications - computerized systems developed by ministries to support their business objectives. The drivers and vehicles registration systems developed by the Ministry of Transportation, the health insurance system developed by the Ministry of Health, and social assistance systems developed by the Ministry of Community and Social Services are examples of applications. Many applications contain elements that could be shared with other ministries.



Information - has been traditionally treated as a ministry or program resource.



Increasingly, the focus is on the use of information across government in a common format. For example, a consistent method of listing common customer information on a file could be developed.

Historically, information, computer and telecommunications applications and much of the information technology infrastructure have been individually developed by ministries. As a result, the OPS has a wide range of computer and telecommunications systems that don't communicate well with each other. This has prevented a cohesive approach to information technology for the government as a whole, and has limited the

government's ability to provide integrated, cost-effective services.

Management Board of Cabinet approved a strategy for the internal use of information technology, which recommended that government develop a co-ordinated corporate approach. The key elements of this strategy are:

- > Put a consolidated wide-area network service in place for all ministry telecommunications facilities and services. This network is known as **GO-Net**.
- > Create organizations and processes to plan, implement and operate GO-Net.
- > Move toward open systems, based on international standards that don't rely on specific vendors (Open System Interconnection). This will allow more suppliers access to government contracts and strengthen the industry.

III Corporate Information Technology Organizational Structures

Information Technology Directions Committee (ITDC)

An Information Technology Directions Committee of deputy ministers was formed to oversee implementation of the new internal strategy. This committee provides direction for GO-Net and corporate information technology initiatives. It ensures that GO-Net services and pricing



reflect ministries' needs, and establishes information and technology standards. For example, the committee approves overall network characteristics and design philosophy, telecommunications procurement and contract awards, which were previously approved by Management Board of Cabinet.

Information Technology Strategic Management Committee (ITSMC)

This inter-ministry committee of Assistant Deputy Ministers is responsible for developing a corporate framework and action plan for managing information technology in the Ontario government. It ensures that new projects are developed corporately with a view to cross-ministry integration.

Government Telecommunications Manager (GTM)

The day-to-day operations of GO-Net are managed and operated by Management Board Secretariat (MBS) through the Telecommunications Services Branch (Network Operator).

The GTM is a small office that assists the Information Technology Directions Committee in strategic planning, serves as a customer liaison, and ensures that ministries have access to high quality advanced telecommunications services at a lower cost than they could obtain individually.

Information Technology Standards Council

This inter-ministry committee of executives reviews standards for information technology from other jurisdictions. The government's strategy calls for a move from stand-alone proprietary systems which gives vendors a virtual monopoly to service and upgrade systems once in place, to vendor-neutral, common standards for telecommunications technology.

This support of Open System Interconnection (international standards) would promote development of Canadian industry and export trade. The existence of international standards will help Canadian suppliers compete in export markets.

IV Implementing the Information Technology Strategy through GO-Net Infrastructure and Services

GO-Net Vision

Shared telecommunications and network applications that enable the government to improve the delivery of information and services both internally and to the public anywhere in Ontario at anytime.

GO-Net is being built as an effective part of the Ontario information highway. The consolidation of existing networks and



contracts into GO-Net has allowed the Ontario government to improve the quality of service -- while holding down unit costs. The design of the GO-Net consolidated network, illustrated below, came out of extensive consultation with technology experts from the public and private sector. The network architecture integrates all government networking components for both voice and data networks. The plan allows the corporate network to meet diverse ministry requirements effectively and efficiently.

The consolidation of government telecommunications services under the umbrella of GO-Net has allowed the government to invest in new services and infrastructure while improving the ability of ministries to serve their clients.

Consolidation has allowed MBS to negotiate new contracts and re-negotiate existing contracts to re-direct more than \$4 million into GO-Net investment in 1993-94.

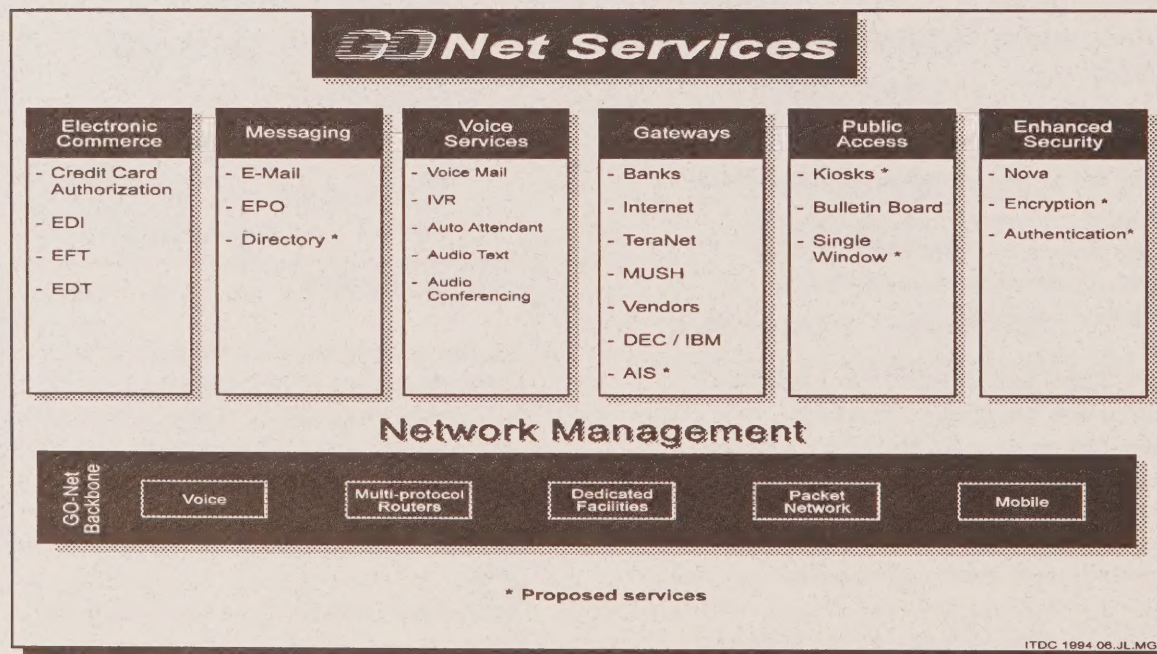
GO-Net Infrastructure

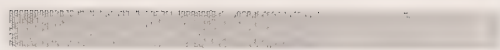
a) Voice Services

The Ontario Communications Network (OCN) voice network provides government-to-government, and government-to-public long distance voice service to ministries. The OCN continues to expand to provide voice services to more than 80 per cent of Ontario government sites.



In the past year, approximately 2,400 staff were converted from the old rotary dial system to the modern Queen's Park Telecommunications System. This improved service gives users the added features of touch tone and electronic transfer capabilities to all government sites in Toronto.





b) Multi Protocol Router (MPR) Service

The MPR service provides cost-effective high speed data networking among sites with local area network (LAN) technology. The system was developed in partnership with two private sector partners, Cisco and Bell Ontario, and has grown to be one of the largest public service multi-protocol router networks in Canada.



Eighteen ministries use the MPR services to support critical ministry programs such as fire and flood control and management in the Ministry of Natural Resources; Ontario Provincial Police public safety programs; sharing of student and curriculum information by Ministry of Education and Training; and Ministry of Environment and Energy weather and pollution reporting programs.

c) Packet Switched Network Service

The Ministry of Community and Social Services' packet switched network has been consolidated with GO-Net to form a cost-effective service that's available to other ministries. With the redesign, more ministries have moved from other expensive networks -- and there is capacity on the system for more use.

d) Government Mobile Strategy

The Government Mobile Strategy will address the need for mobile communications

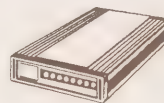
in five Ontario ministries. These ministries each manage their own aging networks that would be very costly to upgrade individually. By working together, ministries will benefit from a new digital network that will provide better service at a cost lower than they could achieve individually.



GO-Net Applications

a) Financial Services

GO-Net financial services are crucial to the re-engineering of ministry program delivery using modern tools. The tools include **electronic data transfer (EDT)**, **electronic data interchange (EDI)** and financial tools that enable **credit and debit card service** convenience at ministry service counters, at kiosks or by telephone.



Ministries are improving customer service by offering a choice of payment methods, including VISA and MasterCard, for government services. The technology supports authorization, settlement, reconciliation and reporting for the cards.



With Electronic Data Interchange, ministries can exchange standard business documents, such as invoices, forms, and purchase orders, electronically without the need for paper copies. Electronic Data Interchange is a tool for re-engineering the government's financial transaction system to provide faster service at lower cost.



It is also a key tool for private sector development, enabling Ontario companies to be globally competitive. GO-Net EDI service has been developed in partnership with the private sector and allows for electronic connection to networks that service corporate Canada and the banking system.

With **Electronic Funds Transfer**, funds can be transferred electronically into an individual's bank account without the costly production and distribution of a cheque. The service is now used for 60 per cent of social assistance payments and expansion is planned to 90 per cent. It is also used for the government's internal payroll.

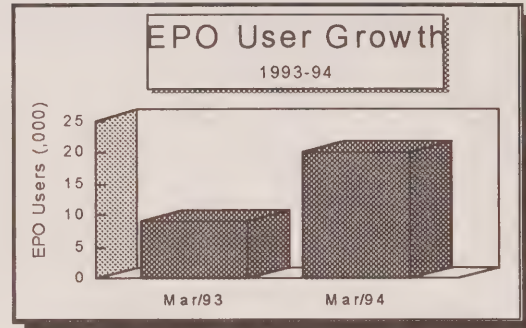
Ministries also use this service to distribute information electronically to government trading partners. For example, the Ministry of Transportation uses EFT to make driver transcripts available electronically to insurance companies, while the Ministry of Health uses this service to connect pharmacists throughout Ontario, and plans to receive claim submissions from 17,000 doctors across the province.

b) Messaging Services

The **Electronic Post Office (EPO)** is a service that allows different electronic mail systems within government and the private sector to communicate with each other.



Between December 1992 and March 1993, the number of government users increased from 13,000 to 19,000. Through a special executive project in 1993-94, the Premier, his staff and most deputies were connected to the Electronic Post Office.



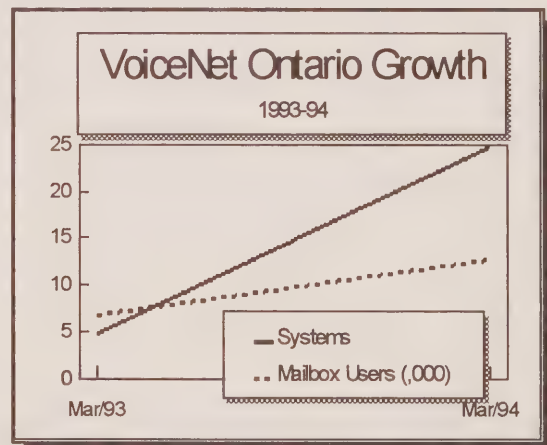
The **interactive voice response and auto attendant** service allows ministries to



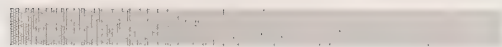
provide service 24 hours a day, seven days a week through interactive voice systems and pre-recorded information. The 25

applications with pre-recorded information receive an estimated 10,000 calls daily.

GO-Net provides a corporate system for **voice messaging** within government. The Queen's Park Telecommunications System was improved to include more than 10,000 voice mailboxes for employees.



GO-Net provides **audio teleconferencing** services throughout the province. This service grew by approximately 45 per cent in the past year and has become increasingly



popular with ministries as a way of reducing travel expenditures.

GO-Net is one of many networks in Ontario. **Gateways** provide access to other networks, such as Internet, and allow the transfer of information from system to system.

Internet provides access to about 20 million users around the world and is used by ministries such as Education and Training and Environment and Energy for joint research with partners around the world.

Gateways into banks are used for EDI, EFT, credit card services, and for corporate access to the personal property registry that tracks liens on property.

c) **Public Access Bulletin Boards**

Public access bulletin boards provide timely, cost effective, access to information 24 hours a day, seven days a week.

This service was introduced in 1993 and was critical to the Ministry of Environment and Energy's delivery of the Environmental Bill of Rights, and Management Board Secretariat's delivery of access to information such as the KWIC index and a directory of records. Information is posted on an electronic bulletin board with access available through computers in public libraries or by home computer via modem or Internet.

d) **Service Cards**

The Information Technology Directions Committee has begun discussions about a co-ordinated corporate approach to managing

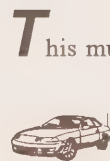


access to government services through machine readable **service cards**.

Service cards have potential for large growth in use by many ministries. The Committee supported the Ministry of Transportation's efforts to develop a machine readable driver card. With the card, police can use a mobile reader to gather information on unpaid fines and other offences on the spot.

V **Delivering Government Programs through Information Technology**

a) **Used Vehicle Information Program (UVIP)**



This multi-ministry program, led by the Ministry of Transportation gives consumers an information package, required when privately selling a used vehicle. It indicates any outstanding lien information, verification of seller's ownership, as well as fair market value of the vehicle being sold. The Ministry of Transportation provides information on prior and current owners of the vehicle, the Ministry of Consumer and Commercial Relations provides lien information on the vehicle, and the Ministry of Finance provides information on the fair market value and GST payments. GO-Net provides the card authorization service and the switch service to connect the databases together.

The UVIP package can be purchased through the Ministry of Consumer and Commercial Relations' phone centre and



through over-the-counter services at vehicle licence offices.

In support of this initiative, the Information Technology Directions Committee approved setting up a new corporate card authorization service to provide services to UVIP and eventually to other government initiatives. This initiative became the first government service offering payment by credit card.

b) Ministry of Transportation Kiosk Pilot

This pilot project enables service delivery



to the public through eight self-service kiosks, 24 hours a day, seven days a week.

Services being piloted are licence plate renewals, change of address on driver licences, driving and vehicle abstracts and payment of fines. All chargeable services are paid through use of credit cards (MasterCard and VISA).

The kiosk service links databases at the Ministry of Transportation, the Ministry of Finance and the Ministry of the Attorney General, and uses the GO-Net to connect the databases and the card authorization service.

The Information Technology Directions Committee has ensured that the Ministry of Transportation pilot for driver licence renewal, through automated self service kiosks, evolves into a corporate approach. The service has the potential to provide one-stop shopping for an expanded variety of government services required by the public.

c) Driver's Card and Health Card

The Committee has supported the ministries of Transportation and Health in their respective use of magnetic strip plastic card technology to improve customer service, reduce program costs, reduce fraud and improve efficiencies.

The Ministry of Transportation will replace the current two-part driver's licence with a single plastic card. Initial production is planned for early 1995, with a three-year rollout to cover the province's 6.8 million licenced drivers.

The Ministry of Health will start producing new photo health cards in 1995, with registration of 11 million people over the next few years. Cards will be renewed every five years. The health card will incorporate a number of new security features. The magnetic strip and a bar code will allow health providers and hospitals to validate cards. Hospitals will be able to use the health card instead of their own cards for administrative purposes, which will cut costs and reduce the possibility of fraud.

A Ministry of Health/Ministry of Transportation partnership will result in technical cooperation, and will allow registration for health cards at 360 Ministry of Transportation offices in addition to 20 Ministry of Health offices.

The Ministry of Health is also implementing a health card swipe reader system in at least 50 hospitals by December, 1994. This will allow hospitals to "swipe" health cards to verify their status. The ministry has also provided access to an Interactive Voice Response (IVR) System for all health care providers so they can verify the status of health cards using a touch-tone telephone.



d) Ontario Health Network

The Ontario Health Network is an essential part of the management of the Ontario Drug Program. The program provides medications to 2.2 million people who are either senior citizens or recipients of social assistance. The Network's primary functions include the processing, on-line and in real-time, of over 42 million prescription claims annually and the calculation of payments to 2,400 Ontario pharmacies, hospital dispensaries and dispensing physicians.



The Network also provides information to assist pharmacists in deciding whether a particular prescription is appropriate, and counselling patients about their drug therapy. It confirms eligibility, checks for potential drug interactions, early or late refills and therapeutic duplications.

The success of the Network is the result of the Ministry of Health, Management Board Secretariat and Green Shield, Canada working together. Green Shield was successful in its bid to help build the Network. This partnership has enabled the government to quickly implement a large complex initiative that improves health care for Ontarians.

e) Social Assistance Caseworker Technology

Innovative technology designed to support social assistance caseworkers is an important component of the Ministry of Community and Social Services' social assistance reform. Caseworker



technology is a combination of micro-computer hardware and software that provide an estimated 6,000 delivery staff with the necessary automated tools to enhance service to clients, achieve benefits and link to current and future systems.

Benefits include:

- immediate analysis of eligibility and entitlement;
- improved response time;
- provision of community service information;
- consistency in determining eligibility and entitlement;
- increased efficiency through elimination of manually intensive administration and redundant paper work;
- strengthened integrity of the system and immediate error detection; and
- reduction of mainframe computer processing costs.

The ministry will form a partnership with a consortium of vendors to provide the planning, acquisition, installation, training and necessary support. The caseworker application software was developed and is being piloted by a joint provincial/Metro Toronto social assistance automation project.

f) The Environmental Bill of Rights (EBR) Electronic Registry

This Ministry of Environment and Energy initiative provides the public with online access to environmental proposals, information on how to participate in the

environmental decision-making process or intervene against a contravention of an environmental law. Fourteen ministries must place their environmental value statements and instruments (permits, licences and approvals) on the environmental registry.



The environmental registry is delivered through the GO-Net bulletin board service. The public can access the information through computers in public libraries, home computers via modems, or Internet.

g) **The Ontario Education Highway (OEH)**

The OEH project electronically links the Ministry of Education and Training with school boards and schools throughout Ontario. The Information Technology Directions Committee approved the expansion of the existing province-wide government telecommunications network to integrate the growing number of networks and service platforms already being used in the education sector. This GO-Net service will help develop new and creative curriculum and learning techniques, allow equal access to information regardless of location, and provide efficiencies in education administration.

h) **Automated Booking of Road Tests**

The Ministry of Transportation has begun a pilot project to improve customer service by using an **integrated voice response (IVR)** service for scheduling drivers' tests. This project allows extended hours access to driver test scheduling, and is currently

handling up to 4,500 calls a day at the two Toronto pilot sites.

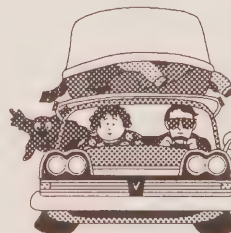
Customer service has improved and productivity improvements and potential cost savings have been identified, with the redeployment of staff to other functions.



Provincial rollout of this pilot would be through the GO-Net corporate IVR service.

i) **Central Reservation and Information Service (CRIS)**

The Ministry of Culture, Tourism and Recreation, in partnership with the tourism industry, has developed a one-stop shopping service with an integrated reservation service for tourism establishments and services across Ontario. The first phase of the project involved the development and implementation of the Ontario Travel Information System, in which the reservation function will be available for 200 sites in eastern Ontario. The second phase covers the expansion of the reservation service to sites throughout Ontario in 1994/95.





CRIS has improved the quality of information provided for the millions of tourism information requests received annually, and "closed the sale" by making immediate reservations whenever the opportunity arises. CRIS will help increase economic returns to the tourism industry through increased occupancy while providing enhanced customer service.

Information technology is now a key component in the government's strategy for how it deals with the public, the business community and interest groups.

While significant progress has been made, more remains to be done, and the Ontario government is committed to increased use of information technology to improve service and reduce costs.

VI Summary

Over the last 18 months, the Ontario government has developed the processes, organizations, infrastructure and applications to use information technology to deliver programs more effectively and at lower cost.

Consolidation of networks and services into GO-Net has improved performance and reduced cost. Investment in infrastructure, such as the packet service and the Ontario Education Highway project, and common applications such as electronic commerce, messaging, gateways and public access have improved program delivery and service to the public.

The Information Technology Directions Committee has led and supported corporate policy initiatives that use information technology. The Ontario government is studying information technology standards to ensure that the systems developed can be integrated into those used by other governments and the private sector.

The use of information technology to deliver and improve access to government programs is growing rapidly. Hours of service are being expanded. Automated self service is becoming more common. Methods of payment are more flexible. Service locations have been expanded across the province.

